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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,136	08/11/2005	Yasuo Kitaoka	10873.1571USWO	5287
53148 7590 10/10/2007 HAMRE, SCHUMANN, MUELLER & LARSON P.C. P.O. BOX 2902-0902 MINNEAPOLIS, MN 55402			EXAMINER VU, MINDY D	
			ART UNIT 2884	PAPER NUMBER
			MAIL DATE 10/10/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/518,136	<b>Applicant(s)</b> KITAOKA ET AL.	
	<b>Examiner</b> Mindy Vu	<b>Art Unit</b> 2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 and 16-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All. b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/15/04 &amp; 9/14/06</u>                                    | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2884

### DETAILED ACTION

This Office Action is in response to Applicant's election of species requirement filed August 30, 2007.

The examiner notes no new claim listing with status identifier has been supplied.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Gunpei (JP 06-317526).

3. With respect to independent Claim 1, Gunpei discloses a fluorometer for detecting intensity of fluorescence generated from a substance that is excited by light emitted from a light source (abstract), wherein intensities  $P_1, P_2, \dots, P_n$  of the fluorescence are detected respectively in  $n$  ( $n$  is an integer of not less than 2) limited wavelength regions  $\lambda_1, \lambda_2, \dots, \lambda_n$  of the fluorescence (Paragraph 0006).

Art Unit: 2884

4. With respect to Claim 2, Gunpei discloses a relative ratio or a difference between the detected intensities  $P_1, P_2, \dots, P_n$  of the fluorescence is determined (Paragraph 0007).

5. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by White (US 2005/0001175).

6. With respect to independent Claim 1, White discloses a fluorometer for detecting intensity of fluorescence generated from a substance that is excited by light emitted from a light source (abstract), wherein intensities  $P_1, P_2, \dots, P_n$  of the fluorescence are detected respectively in  $n$  ( $n$  is an integer of not less than 2) limited wavelength regions  $\lambda_1, \lambda_2, \dots, \lambda_n$  of the fluorescence (Paragraph 0016).

7. With respect to independent Claim 3, White discloses a fluorometer for detecting intensity of fluorescence generated from a substance that is excited by light emitted from a light source (abstract), comprising:  $n$  ( $n$  is an integer of not less than 2) narrow-band-pass filters for transmitting light in different limited wavelength regions of the fluorescence (Paragraph 0015), and  $n$  light-receiving portions having one-to-one correspondence with the  $n$  narrow-band-pass filters (Paragraphs 0037 & 0039), wherein an intensity  $P_1$  of fluorescence transmitted through a first narrow-band-pass filter 11 is detected by a first light-receiving portion (at the measuring path 12), and wherein fluorescence reflected from an  $(n-1)$ -th narrow-band-pass filter 11 is allowed to enter an  $n$ -th narrow-band-pass filter 17, and an intensity  $P_n$  of fluorescence transmitted through

Art Unit: 2884

the n-th narrow-band-pass filter 17 is detected by an n-th light-receiving portion (at the measuring path 18).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over White (US 2005/0001175) in view of Gunpei (JP 06-317526).

10. With respect to Claim 4, White discloses the detection of the intensities of the fluorescence (Paragraphs 0037 & 0039). White omits a relative ratio between the intensities is determined. Gunpei discloses calculating a ratio between the detected intensities is a well known technical feature in fluorescence analysis (Paragraphs 0002-0007). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to determine a relative ratio between the intensities since it is a well known technical feature in view of analyzing the sample.

11. Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over White (US 2005/0001175) in view of Tatsuro (JP 2002-350732).

12. With respect to Claims 8 and 12, White discloses the light source is a laser instead of a light-emitting diode (LED). However, Tatsuro discloses selecting a light

Art Unit: 2884

emitting diode as the excitation light source of fluorometric analysis is a well known technical matter (Paragraph 0007). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use a light emitting diode as a light source in view of simplifying the circuit (Paragraph 0006).

13. Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over White (US 2005/0001175) in view of Shigero et al. (JP 2002-181706).

14. With respect to Claims 9 and 13, White discloses the light source is a laser and silent about the laser being a wavelength-variable semiconductor laser. Shigero et al. discloses selecting a wavelength-variable laser as an excitation light source of fluorescence analysis is a well-known technical feature (Paragraph 0021). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide a wavelength-variable semiconductor laser in view of analyzing the sample.

15. Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over White (US 2005/0001175) in view of Kohei et al. (JP 2000-304699).

16. With respect to Claims 10 and 14, White discloses the substance but lacks a rare-earth element is added to the substance. Kohei et al. discloses a rare-earth element can be the subject to be analyzed in fluorescence analysis (Paragraph 0021). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

Art Unit: 2884

invention was made to include a rare-earth element in view of choosing different types of substances to be analyze.

17. Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over White (US 2005/0001175) in view of Hidekazu (JP 2001-124696).

18. With respect to Claims 11 and 15, White discloses the detected intensities of the fluorescence but omits a wavelength width of a spectrum of the fluorescence generated from the substance is detected by comparing the detected intensities  $P_1, P_2, \dots, P_n$  of the fluorescence. Hidekazu discloses a technique for identifying a material based on fluorescence spectral analysis. Furthermore, a technique for identifying a material using spectral analysis, in which the difference in spectral form based on the ratio of measurement intensities at plural wavelengths is judged to identify the material (Paragraph 0027). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply the steps as suggested by Hidekazu in view of analyzing the sample.

### ***Conclusion***

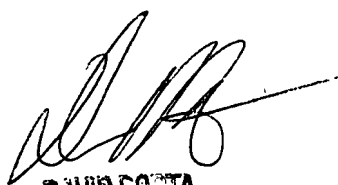
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mindy Vu whose telephone number is 571-272-8539. The examiner can normally be reached on M-F 9am - 5:30pm.

Art Unit: 2884

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mv

  
**DAVID PORTA**  
**SUPERVISORY PATENT EXAMINER**  
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